



ELECTRICAL CURRENTS

Newsletter from the Office of the Chief Electrical Inspector

Ron Fuller, Chief Electrical Inspector

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● Stakeholder Meetings for 2001

The department is again offering 4 Continuing Education Units (CEU's) for those who attend the meetings and score at least 70% on a take-home examination.

April 16, 2002, 7-9PM	CCS Institute for Extended Learning, Monumental Room, 985 S. Elm St., Colville
April 17, 2002, 7-9PM	Pullman City Hall, Community Center, 325 SE Paradise Street, Pullman
April 18, 2002, 7-9PM	Spokane Community College, Lair-Student Center, 1810 N. Greene St., Spokane

● Electrical Compliance Efforts Have Increased Dramatically

The electrical program's compliance efforts are the results of requests from our legitimate industry partners to help them compete on a level playing field against unlicensed contractors and electricians by targeting unlicensed electrical contractors and electricians and the contractors who hire them. We are committed to improving our efforts to eliminate the underground electrical economy and improve safety for consumers and workers.

Adjudicated Citations for unlicensed electrical contractors and uncertified electricians for October, November, and December of 2001:

- 43 Citations – UNLICENSED ELECTRICAL CONTRACTING (Minimum Penalty-\$500), \$22,500 in total penalties.
- 42 Citations – WORKING AS AN UNCERTIFIED ELECTRICIAN (Minimum Penalty-\$100), \$4,200 in total penalties.
- 42 Citations – To Administrators/Contractors for HIRING ILLEGAL ELECTRICIANS (Minimum Penalty \$100), \$8,500 in total penalties.

These citations represent approximately 32% of all penalties assessed during the quarter. This winter, during attempts to increase compliance in the underground economy and improve operating efficiencies, the department committed resources to provide electrical inspectors with specialized electrical compliance classroom training and accompanied job-site visits to enhance inspector's investigative skills. Compliance is a major part of our duties and will continue to be an area of emphasis for the electrical program.

● Engine Generator Listing And Labeling

On September 1, 1998 Underwriters Laboratories published the first edition of UL 2200, *Stationary Engine Generator Assemblies*. This standard represents the first formal U.S. national product safety requirements for generators. These requirements cover stationary and fixed generators rated 600 volts or less that are intended for installation and use in ordinary locations in accordance with the National Electrical Code (NEC).

RCW 19.28.010 requires all equipment used in electrical installations to be of a type that conforms to applicable standards or be indicated as acceptable by the established standards of an electrical product testing laboratory that is accredited by the department.

UL 2200 is the standard recognized by the department for the approval of stationary engine generators. The standard has been in effect since 1998 and manufacturers have had adequate time to conform; in fact, hundreds of listed products are available today. **Beginning April 30, 2003, the department will require all engine generators rated 600 volt or less to be listed and labeled (or field evaluated to the standard) by a Washington State accredited electrical products certification laboratory or electrical products evaluation laboratory** (per WAC 296-402A—Electrical Evaluation/Certification Laboratory

Accreditation). This will allow distributors of engine generators adequate time to exhaust any inventory of unlisted equipment prior to the deadline.

● Dwelling Unit General-Use Receptacle And Outlet Branch Circuit Loading

The minimum number of general-use branch circuits in dwelling units is calculated using 3 volt-amperes (VA) per square foot in accordance with 1999 NEC 220-3(a). Once the minimum number of branch circuits is determined, installers must evenly proportion the load among the branch circuits per 1999 NEC 210-11(b). Even distribution may be achieved either by dividing the square footage of the house by the number of required branch circuits or by dividing the number of receptacle and lighting outlets by the required number of branch circuits.

Since the NEC requirement for arc-fault circuit protection (AFCI) of bedroom receptacle outlets became effective January 1, 2002, our inspectors have seen installers attempt to combine all of the bedrooms in large dwelling units on a single branch circuit. The department will not allow installers to unevenly distribute load on bedroom receptacle circuits in violation of 1999 NEC 210-11(b) in order to reduce the number of AFCI devices required.

● Receptacles At Window Seats

1999 National Electrical Code 210-52 (a)(1) states: *"Receptacles shall be installed so that no point along the floor line in any wall space is more than 6 ft (1.83 m), measured horizontally, from an outlet in that wall space. Receptacle outlets shall, in so far as practicable, be spaced equal distances apart."*

Receptacle outlets installed in dwelling units in the wall space below an area intended as a built-in window seat can create an unsafe condition when in use. A cord plugged into such a receptacle is subject to being disconnected by a person sitting at the window and could create a tripping hazard.

The department does not consider the space below a window seat as wall space and does not require an outlet below the window seat. However, we will not prohibit the installation of a receptacle(s) in that area. The receptacle spacing requirements for wall spaces begins at the ends of the opening.

● Determining The Proper Wiring Methods For A Specific Building Occupancy

The Authority Having Jurisdiction (AHJ) for electrical inspections is responsible for enforcement of the requirements of the National Electrical Code. Owners, installers, and designers must also work with other AHJ's, such as building officials and fire marshals, to determine the appropriate electrical installation requirements for some building or area occupancies or uses.

Questions regarding use or character of occupancy, occupancy separation, types of construction, fire-resistant materials and construction, and proper classification and boundaries of hazardous locations often require the expertise of building and fire officials. It is essential for both the installer and the electrical inspector to know the proper building (or other area) classification to ensure correct wiring methods and materials are used.

● Code Question of the Month

This month's Code Question: What is the length of thermal expansion and contraction expected in a run of rigid non-metallic conduit 25 feet in length when the minimum temperature encountered is minus 5 degrees (F) and the maximum is 110 degrees (F)?

A) No change, B) 1.175 inches, C) 2.15 inches, D) 4.7 inches.

Last month's Code Question: Overcurrent protection devices are not permitted to be located_____?

A) where exposed to physical damage. B) near easily ignitable materials, such as clothes closets. C) in bathrooms of dwelling units. D) all of these. **The answer is: D) All of these. [NEC 240-24]**

● 2002 WAC Rule Development Workgroups

Governor Locke has signed Engrossed Senate Bill 6630 and the department needs to begin the rule development process to facilitate enforcement of the new additions to chapter 19.28 RCW. We will have two separate workgroups with 12 to 15 active (working) stakeholder members on each. The **“technical”** group will focus on adoption of the new 2002 NEC and related technical changes in WAC 296-46A. The **“licensing and certification”** group will develop language that covers trade/training school program experience for specialties; master electrician criteria; new electrical specialties, scope-of-work, and on-the-job training requirements; and other licensing and certification issues in both WAC 296-46A and WAC 296-401B.

The 12 to 15-person limit for each workgroup is necessary to ensure the ability of the groups to be productive in the limited amount of time we have to complete the work. At all workgroup meetings, working members must have “decision making authority” from the portion of the industry or groups that they represent. Each workgroup will meet (not less than) twice in June, once in July, twice in August, and once in September. If vacation schedules create meeting attendance conflicts, members must have alternates attend with the same ability to make decisions. Active members of the workgroups are expected to communicate workgroup activity to the individuals and organizations they represent. This may involve hosting or attending additional meetings with your constituents.

We will follow the same model that has proved successful in previous WAC rule development cycles. We will host the first organizational meeting where all stakeholders can attend and participate in the selection of active workgroup members to represent various sectors and groups in the electrical industry. If you are willing to devote the substantial time and effort required of the workgroup members, you should start lobbying for the support of others you want to represent and have them endorse your representation at the selection meeting.

The initial open meeting for selection of workgroup members is scheduled for **Monday, May 6, 2002, 1:00 P.M.-4:30 P.M., Main Auditorium, Department of Labor and Industries Building, 7273 Linderson Way SW, Tumwater** (at Exit # 101-Airdustrail Way, off Interstate 5). If you need any additional information, you may call 360-902-5249.

● The Department Is Seeking Stakeholder Input For Proposed Rule Changes

Any stakeholder in the electrical industry may make proposals for additions and/or revisions to the Washington Administrative Code (WAC) electrical rules. **Proposals must be received by July 31, 2002.**

Rules are developed to aid both the stakeholders and department in clarification or enforcement of the intent of the statute. All rule proposals must be based on the responsibility mandated or authority granted to the department in chapter 19.28 Revised Code of Washington (RCW). New rules cannot be drafted simply because an individual feels that “it’s a good idea.” Technical changes require evidence of a specific problem and substantiation that the proposal will provide a solution.

New proposals should clearly identify original language as “new text.” Proposed revisions should include the relevant existing text and should use the legislative format. Use underscore (or underlining) to denote wording to be inserted (e.g. inserted wording) and strike-through to denote wording to be deleted (e.g. ~~deleted wording~~).

The form on the back of this page may be copied and used to submit rule proposals for **WAC 296-46A—SAFETY STANDARDS—INSTALLING ELECTRIC WIRES AND EQUIPMENT** and/or **WAC 296-401B—CERTIFICATION OF COMPETENCY FOR JOURNEYMAN ELECTRICIANS**. A fill-in version of the form will soon be available on our website homepage. Formal proposals must be properly completed and signed by the submitter or they will not be evaluated by the rule revision workgroups. The signed forms must be mailed to Chief Electrical Inspector, P.O. Box 44460, Olympia, WA, 98504-4460 or faxed to (360) 902-5229. We cannot accept e-mailed proposals.

FORM FOR PROPOSALS FOR 2002 WAC RULE CHANGES

Mail to: Chief Electrical Inspector
Department of Labor and Industries
Electrical Section
PO Box 44460
Olympia, WA 98504-4460

Fax to: (360) 902-5229

FOR L&I USE ONLY

Date Received:

NOTES:

1. All proposals must be received by July 31, 2002.
2. Type or print legibly in black ink. Limit each proposal to a single rule section. Use a separate copy for each proposal.
3. Include supplementary material (photographs, diagrams, reports, etc.) if necessary to support your proposal.

Date: _____ **Name:** _____ **Telephone:** _____

Representing: _____

Mailing Address: _____

1. Rule/Section: _____ (Check one): ☐ New Text ☐ Revised Text ☐ Deleted Text

2. Proposal: *Include new or revised wording, or identification of wording to be deleted. Proposed text should be in legislative format. Use underscore to denote wording to be inserted (e.g. inserted wording) and strike-through to denote wording to be deleted (e.g. ~~deleted wording~~).*

3. Statement of Problem & Substantiation for Proposal: *Note: State the problem that will be resolved by your recommendation; give the specific reason for your proposal.*

4. Check one: ☐ This proposal is original material ☐ This proposal is not original material

5. Signature (required): _____